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Generating spatial quality through co-creation. Experiences from the Blankenburgverbinding (The Netherlands)

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Abstract

Transport infrastructure not only makes areas accessible it also influences the spatial quality. Areas in turn affect the functioning of networks. Transport infrastructure and adjoining areas are thus symbiotically linked. Yet in practice it appears a challenge to effectively integrate infrastructure and area in planning and management. In policy-making and the planning science, joint planning or co-creation between public planning authorities and stakeholders is regularly mentioned as the key for integral development. But how to shape the process and instruments of co-creation, when the interests of the stakeholders vary and project frames (such as time and budget) are tight.

The case study of the Blankenburgverbinding, as presented in this paper, addresses these questions. The Blankenburgverbinding is a new infrastructure project to the west of Rotterdam in The Netherlands, crossing a densely populated area including valuable ecological zones. A complex challenge that requires an integral solution. Through so-called design tables and counselling groups, various stakeholders are actively involved in the planning and design process. The search for integrated spatial quality is thereby the base.

This paper describes the method of involvement, in particular the tensions between project management and participation. The aim of the paper is to give practical lessons and recommendations for co-creation at the interface between infrastructure and area, where the search for an optimal balance between mobility and spatial quality is the driver.

Keywords: projects, integrated planning, spatial quality, co-creation, stakeholder involvement, participation

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1. Introduction

In the planning of transport infrastructure there is a growing awareness of the interaction between infrastructure on the surrounding area (Banister, 2011; Heeres et al, 2012; Busscher et al, 2014) and therefore the need for integration of infrastructure and spatial planning. Transport infrastructure networks connect areas. By stimulating the socio-economic development of an area it creates mobility demand affecting the functioning of infrastructure networks. However, infrastructure not only makes areas accessible it also influences the spatial quality by cutting through it. Transport infrastructure and adjoining areas are thus symbiotically linked (Neal, 2013; Witte, 2014). Yet in practice it appears a challenge to effectively integrate infrastructure and area in planning and management. In the policy-making and planning science joint planning or co-creation between public planning authorities and stakeholders is regularly mentioned as the key for integral development (Forester, 1999; Heeres et al., 2012; Van den Boomen & Venhoeven, 2012; Arts et al., 2014). Co-creation opens the opportunity to create "more with less", through synergy between infrastructure and spatial development (Peek, 2006; Planbureau voor de Leefomgeving, 2014).

Besides the current pressure on governments to achieve policy more effectively and efficiently ("new public management"), society becomes more emancipated. People take responsibility to design their own environment. Citizens' initiatives are becoming more common (Hajer, 2011). The power of interest groups, NGO's and individual stakeholders is increasing. These developments involve a shift in the traditional balance of power (De Roo, 2007). Powerful public organizations such as Rijkswaterstaat[†], responsible for infrastructure networks, can no longer work autonomously and have to work together with local governments, citizens, landowners, entrepreneurs, the market and civil society organizations (Boelens, 2010). Public organizations thereby have to change from an internal to an external orientation focused on co-creation (Van den Brink, 2009; Gebauer et al., 2010; Rijkswaterstaat, 2011; Ryan, 2012; Heeres et al., 2012).

The issue of participation and co-creation is broadly discussed in literature. However, literature on actual implementation and experiences in a project context is very scarce. How to shape the process and instruments of co-creation, when the interests of the stakeholders vary and project frames (such as time and budget) are tight?

The aim of this paper is to give practical lessons and recommendations to project managers on how to cooperate at the interface between infrastructure and its surrounding area. The paper describes methods of involvement, both from a theoretical perspective and from practical experience, through the case Blankenburgverbinding, a new infrastructure project to the west of Rotterdam in The Netherlands. The project is a complex challenge that requires an integral solution. Through so-called design tables and counselling groups, various stakeholders are actively involved in the planning and design process. The search for (additional) integrated spatial quality is thereby the base. *Spatial quality* is regarded in this paper as the outcome of an interaction process which brings stakeholders together, instead of a pre-defined value. In particular the tension between project progress (project management driven by time, budget and scope) and participation of stakeholders and environment (stakeholder management driven by involvement, trust and relations) is described and analyzed. Knowing how to deal with this tension is crucial for successful implementation of co-creation in a project.

2. Fundamentals of co-creation

According to the Oxford English Dictionary cooperation means that two or more parties undertake activities together with the aim to serve the interests of all. Camarinha-Matos and Afsarmanesh (2006) define cooperation on a scale of alignment between parties. The basic form is communication and information exchange between parties involved. Thereto coordination, i.e. the tuning and adjusting of mutual activities, can be added to achieve results

[†] Rijkswaterstaat is the executive department of the Dutch ministry of Infrastructure and Environment responsible for the realization and exploitation of the main road and waterways network.

more efficiently. In (what they describe as) cooperation mutual resources have to be exchanged. Collaboration is the ultimate form of cooperation, when information, activities, resources and responsibilities are jointly planned, implemented and evaluated to achieve a common goal. Prahalad & Ramaswamy (2002; 2004) use a similar scale for the intensity of the relationship between a customer and a supplier. They see mutual agreements as the basic relationship. *Co-creation* is when the customer is intensely involved in all aspects of the production and product development. Alford (2009) describes co-creation for the public sector as the involvement of stakeholders in the agenda setting, the development and the implementation of public policies. De Koning & Van den Broek (2011) define co-creation between government and citizens as the joint development and the improvement of policies and services at an equal level through constructive dialogue. In all these definition, joint development in equity, interaction and dialogue, influence on agenda setting, high involvement and common goals are main characteristics for co-creation (see also Osborne & Strokosch, 2013; Voorberg et al., 2014).

In this paper co-creation is considered as the most intense form of cooperation. In the above definitions the main building block for cooperation is information exchange or communication. Therefore, the intensity of the cooperation depends on the access the various parties have to relevant information. In turn this depends on interaction, transparency and trust (Kadefors, 2004). Communication can be defined as a continuum from monologue to dialogue. Dialogue means interactivity, engagement and a propensity to act on both sides. It is about empathic understanding. It means learning on both sides and a communication of equals (Healey, 1993; Forester, 2008). According to Prahalad & Ramaswamy (2001) the combination of *information access*, *interaction* through dialogue and *transparency* is the base of co-creation.

Based on the definitions and descriptions in this section, the concept of co-creation (as level of cooperation) can be characterized from the intensity of information access, dialogue and transparency as given in Figure 1.

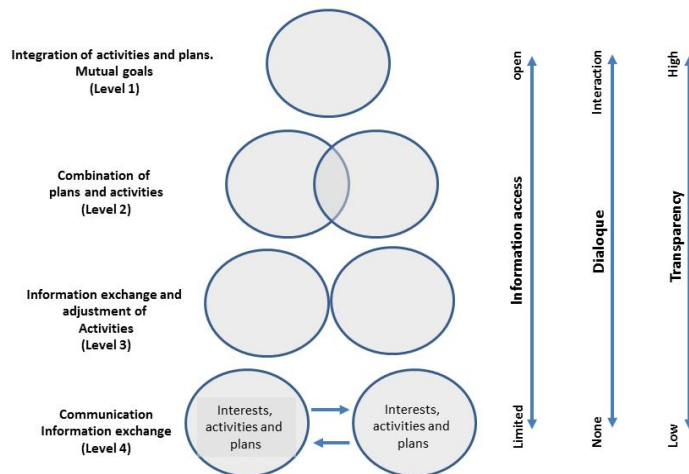


Figure 1: Co-creation on a scale of information access, dialogue and transparency.

3. Participation through co-creation

The Dutch Ministry of Infrastructure and Environment defines public participation as "the participation of citizens, businesses and civil society in the preparation of decision-making ..." (Ministerie van Infrastructuur en Milieu, 2014, p. 2). Participation can be initiated by government or by actors in the community. Four different forms of participation are distinguished, which are related to the 'classic' ladder of participation by Arnstein (1966; see also Edelenbos, 2000). The first form is *active participation* in policy-making, government planning and realization of programs and projects. Citizens, businesses and organizations contribute by participating or are asked to give their opinions in consultations. This happens for example through citizens panels organized by the government,

(digital) consultation rounds or by active citizens who submits an opinion through the official procedures. *Societal initiatives* are independent initiatives from society separate from a specific government plan. The government can support and facilitate these initiatives. Policy concepts such as the "energetic society" the "do-democracy" or "active citizenship" concern the stimulation of community-based social initiatives supported by the government (Hajer, 2011). A third form is *cooperation* between societal promoters or organizations and the government. Directors, officials, citizens, businesses and organizations can decide to cooperate in a project or initiative. The last form of participation mentioned in the Code is *societal initiatives in response to government plans*. In this situation the government initiates a plan with which society does not (completely) agree. In response to this initiative community parties come with an alternative solution to prevent an undesirable alternative.

In this paper the experiences of active participation will be discussed through the case Blankenburgverbinding, a project managed by Rijkswaterstaat. In this project the stakeholders are involved through (what is called) Strategic Stakeholder Involvement or SSI (Wesselink, 2010; see also Hamersma et al., 2014, Leendertse et al., 2015). SSI combines traditional stakeholder management, designed to minimize risks caused by parties with different interests and to exploit opportunities (Rijkswaterstaat, 2009), with the principles of issue management and project management. It is based on the Mutual Gains Approach developed by Fischer & Ury and (later) Susskind (Fischer & Ury, 1991; Susskind, 1987, 1996, 1999). The basic principles of SSI are given in Table 1. Achieving mutual gains implies finding solutions that are supported by the involved parties. Issue management is used for continuously scanning the environment for new issues. An issue can be described as a development or event that might happen and forces stakeholders to take position. Project management is used in SSI to phase the process in clear steps and use typical project management instruments such as issue and risk lists, stakeholder-matrices, roadmaps and monitoring systems.

Table 1: SSI Principles (source: Wesselink, 2010)

SSI Principles	Focus
1 Strive for mutual gains for all involved parties	Look for a solution that is favoured by all parties. Expand the possibilities for mutual gains that can compensate for losses.
2 Engage in the interests of stakeholders	Understand the pain of the stakeholders.
3 Distinguish between positions and interests	Look for solutions at the level of interest, not at the level of positions. Look for the interests associated with opinions.
4 Be trustworthy. Do what you promise	Internalize the approach, be modest in commitments and admit mistakes.
5 Good preparation and good analysis	Build a good understanding of the interests, powers and emotions.
6 Scan issues first, than stakeholders	Start with an overview and then focus on parts and details
7 Make transparent decisions and decisions transparent	Be open. Provide information adjusted to participation, balanced with the project (expectation management).
8 Spent most time on the most important stakeholders	By identifying and analysing issues early, the dialogue with stakeholders can start early. Use dialogue and interaction to understand interests.
9 Distinguish between cooperation and conflict	First phase is to understand each other's opinions, interests and worries about the impact of plans (constructive negotiations). Second phase involves the conclusion of agreements on subjects with opposite interests that cannot be agreed in the first phase.
10 Make package deals	Package deals prevent subsequent one-off negotiations and force to cooperation.
11 Monitor mutual agreements	Monitoring and securing of achieved results and building of trust
12 Stay with the SSI principles	Beware of quick wins. Stay engaged.

In the SSI principles all fundamentals of co-creation, as mentioned in the previous section, are present. Based on these fundamentals, co-creation in a project environment means that the project engages the stakeholders in a collaborative design process. The project organization respects and uses the expertise of the stakeholders in joint design and is open and transparent about all information necessary for the joint design as are the stakeholders. The design is based on problem-specific interaction involving the interests of relevant stakeholders. Decision-making is based on the weighing of interests. The outcome of this process is regarded as jointly agreed (additional) *spatial quality*.

4. The practice of co-creation, a case study

4.1 The case Blankenburgverbinding

The accessibility of the Rotterdam region is very important for the Dutch economy. Besides being the largest port complex in Europe and hosting the horticultural center of Westland (the so-called “Greenport Westland”), the Rotterdam region is an area of multiple businesses and creative activity. To guarantee accessibility, the quality of life and the continuation of economic activities a new connection in the Rotterdam transport infrastructure network is planned, the Blankenburgverbinding (see Figure 2). The Blankenburgverbinding connects two existing highways to the west of Rotterdam (the A15 and the A20) and provides a new river crossing of the Nieuwe Waterweg. The new connection will increase the logistical robustness of the Rotterdam infrastructure network and secure the connection of the port of Rotterdam with the hinterland.

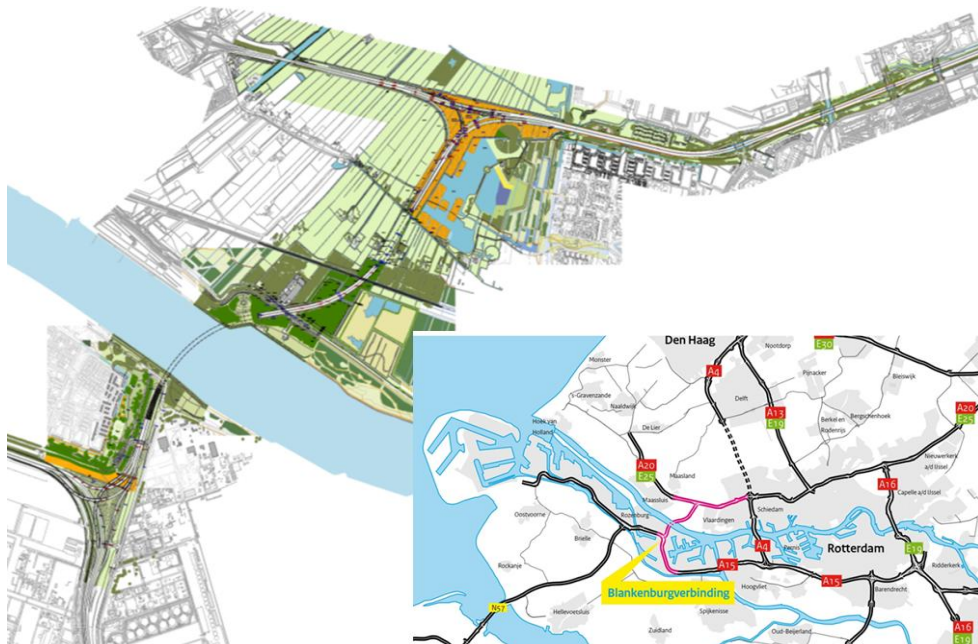


Figure 2: The planned Blankenburgverbinding

Since 2011 the project organization intensely cooperates with stakeholders in the area in the process of planning and design of the Blankenburgverbinding. In line with the SSI principles, the objective is to share available information (technical design, landscape design, effects and underlying studies) as early as possible with the various stakeholders. This allows them to think proactively about possible solutions and bring in their interests timely.

4.2 Approach of participation in the Blankenburgverbinding

The development of (large) infrastructure projects in the Netherlands is broadly divided into four phases: the exploratory phase starting with project start decision and ending with a preferred alternative, the plan development phase ending with the project realization decision, the realization phase ending in completion of the project and the exploitation and maintenance phase (see Ministerie van Infrastructuur en Milieu, 2011).

In the exploration phase two alternatives for the location of the new river crossing were developed by the project organization together with local government officials, representatives from (local, regional and national) businesses, interest groups and local residents through so called design tables. Design tables are workshops focused on joint design. Besides the development of ideas, these design tables intended to gather information about the area and to keep the participants informed about the process. In the design tables the participants were stimulated to actually

join in the designing. Designing meant entering a dialogue about the problem based on the following questions: What problems needs to be solved? How can it be solved? What distinguishes the possible solutions? The process was interactive and iterative. Confronting the participants with the impact of their own and others proposals, made the designing process active. During and after the design tables the generated variations were further detailed by the project organization including the effects on the environment. The results were shared with the participants for consultation before the decision-making, so that participants' reactions could be included. Beside the design tables participation was and is based on a variety of dedicated instruments (see Table 2). The instruments vary from pure communication to a certain level of co-creation (see also Figure 1).

The design tables were continued during the planning phase, especially on the issues of landscaping and local integration of the road and tunnels in the surrounding area.

Table 2: Instruments of participation and level of co-creation used in the Blankenburgverbindung during the exploration and planning phase

Period	Instrument	Description and objective	Level
Exploration Phase (2009-2013)	Public campaign	Start of the exploration phase through a dedicated website and public interviews. Insight in opinions, ideas regarding the present situation and global plans for the new infrastructure.	4
	Citizens' panels	Dedicated discussion panels with local residents (grouped). Residents' opinions about plans and insight in arguments	3
	Regular regional administrative consultations	Regular meetings with local administrations and NGO's. Every six weeks on average. Inform about process progress.	3
	Meetings with administrative partners	Inform regional politicians. Twice a year on average.	3
	Regular stakeholder meetings	Inform stakeholders about participation process and design progress and retrieve information about requirements, conditions and wishes. Every two months on average.	4
	Residents' information evenings	Information evenings for residents every three months on average. Inform about participation process and design progress.	4
	Design tables (alternatives)	Generation of ideas, co-development of variants and discussion about effects and preferences. Three times in exploration phase regarding general alternatives. Participants: local administration, local businesses, residents and NGO's.	2
	Formal consultation	Formal consultation procedure of preferred alternative decision. Statements of objection.	3
Planning Phase (2013-2015)	General consultation about start of planning phase	Start of the planning phase. Inform all relevant parties and individuals about planning process and participation.	4
	Online consultation	Retrieve general opinions and ideas regarding the architectural and environmental design given the preferred alternative. Through the website.	3
	Regular regional administrative consultations	Regular meetings with local administrations. Inform about process progress and results. Every six weeks on average.	3
	Meetings with administrative partners	Inform regional politicians. Twice a year on average.	3
	Reflection groups	Transformation of regular stakeholder meetings (inform) and citizens' panels to active stakeholder reflection groups. Five times a year on average. Reflection on design elaboration and studies.	2
	Residents' information evenings	Information evenings for local residents every three months on average ("Looking in our kitchen"). Inform about design progress and presentation of results.	4
	Design tables (variants)	Generation of ideas, co-development of variants and discussion about effects and preferences. Twice in the planning phase regarding specific issues. Participants: local administration, local businesses and residents.	2

In 2016 the realization phase of the Blankenburgverbinding will start. Participation will continue in the same line as the exploration and planning phase. A difference will be, that the contractor(s) for the road- and tunnel contract(s) will intensively be involved in the participation process.

5. Findings on basis of an evaluation against the SSI criteria

Below we discuss the findings of evaluating the experiences gained in the exploration and planning phases of the Blankenburgverbinding against the SSI criteria of Table 1.

Mutual gains for all involved parties. All-important are the people involved. Personal drives, the capacity to engage in the interests of others are essential. A regular evaluation of stakeholder representatives, team members and process is therefore advisable. An important driver in the participation process of the Blankenburgverbinding was the conviction among participants that the area needed an upgrade in spatial quality anyway. Most (local) stakeholders regarded the Blankenburgverbinding as extra driver for this upgrade and the co-creation attitude of the project organization as stimulating. However, it proved an illusion to get all stakeholders involved in the process or to satisfy all the stakeholders that were involved. Especially environmental NGO's were principally against the project and did not want to join the co-creation process so they could keep their negotiation positions. Complicating was, that the local governments were already planning the upgrade of the area themselves. So the Blankenburgverbinding merely adjusted its own plans to the area plans developed by the local governments. Negative was that this caused a natural separation, which made it difficult to integrate both plans in an integral joint design. Consequently, the co-creation focused on specific parts and adjustment of interfaces.

Engage in the interests of stakeholders. It should be a personal interest of project employees to engage in the worries of others and to reduce these worries through information and customized design. As the project advances, however, the design room to deal with these worries reduces due to choices. Due to the cooperative attitude both the project and the stakeholders tended to avoid choices as long as possible. Especially in the planning phase this resulted in tension between project management, SSI and stakeholder expectations. Contrary to the open attitude of the project, project management sometimes needed to force decisions. Because of personal involvement of project employees they were sometimes literally squeezed between project management and stakeholder expectations. It is all important to manage these expectations. As the project advances an open and interactive attitude must evolve to a more business-minded attitude. As a consequence the room for co-creation shifts from overall alternatives to local variation.

Positions and interests. Stakeholders usually react on plans based on opinions. It is important to find the (underlying) interests associated with these opinions through inventories, analyses and dialogue. What are their worries and why? An inventory and analysis of all potential stakeholders and all relevant information was made and regularly updated. Who are they? What do they stand for? How are they structured? Who do we already know? Do they already have an opinion about the project? Stakeholders, however, do not always have an explicit opinion and their opinions grow over time. In the exploration phase, a lot of stakeholders were against the project and did not want to get involved. After the planning decision, most of the stakeholders changed their opinion from against the project to "getting the best out of it".

Building trust. It proved important to manage expectations, communicate open in case of changes and to be predictable and consistent in process and behavior. In practice this was not easy. The project planning and therefore the planning of delivering information was changing continuously due to the complexity of the project. Moreover, from the perspective of budget management, the ministry and the project organization showed a natural attitude to restrain from commitments and to remain non-committal as long as possible, which was (sometimes) at odds with open communication.

Preparation and analysis. Issues are constantly changing. Interaction and dialogue are needed to analyze the relevance of issues and interests behind them. Relevance is also determined by the obstructive power (of environmental organizations) and the power of realization (investments by ministry, local governments and harbor authority). To balance interests, room for creativity is needed, which is determined by the boundary conditions of relevant stakeholders. Again this needs dialogue, looking for synergy. The project organization should manage this process and facilitate through information and design.

Scan issues first, than stakeholders. Our experience is that this is not a sequential, but a parallel, iterative and integrated process. Issues are mostly related to several stakeholders. Concentrating on issues and the solving of associated problems or worries, instead of concentrating on stakes, proved to be helpful to initiate and stimulate the interaction between stakeholders.

Transparency. Important is to make all arguments of decisions accountable to stakeholders so they can follow the discussions. Manage expectations of information exchange. Not all information is available or suitable to exchange with (all) stakeholders at certain times, because some information is politically sensitive or cannot be disclosed because of legal requirements (such as cost information during procurement). Regularly in the process of the Blankenburgverbinding tension arose between stakeholder expectations and the actual participation room that could be provided. Practice is that stakeholders often want very detailed information in (too) early stages of the project, caused by uncertainty or distrust. Being open about the process and management of expectations is the only way to deal with this information a-symmetry..

Important stakeholders first. In our experience the most important issues should be addressed first. In practice the important stakeholders are involved in the most important issues.

Cooperation and conflict. Start always by looking for a solution space in cooperation. Conflicts should be transferred to cooperation as soon as they emerge through interaction and communication. Lasting disagreements should be negotiated at the right levels in the organization.

Package deals. If the number of stakeholders regarding an issue is limited, package deals are favorable. The advantage of a package deal is that it forces stakeholders to interact collectively. But practice shows that customized solutions are always necessary.

Monitor agreements. It is important to record all agreements and to keep them. Therefore it is important to agree on how agreements should be fulfilled and how they should be proved. Agree also on the method of feedback.

6. Discussion and lessons learned

6.1 Information access

A project evolves over time. Therefore, the form of participation has to evolve in accordance with the development of the project. At an early stage plans are abstract and general. Because the information is global, the evaluation of practical implications of decisions by participants is difficult. However, because decisions are still general the influence of participation can be considerable. At a later stage of the project a large number of issues are settled, restricting the opportunities for participation. The participation approach must therefore be consciously adjusted to the participants' expectations for each phase of the development of the project.

Stakeholders often want more detailed information than the project can provide at a certain time. There is a great need for detail especially on effects at a time when the project is still developing its global designs for decision-making. To be transparent under a tight schedule it is necessary to keep the stakeholders continually informed about the planning and the on-going process including changes. Transparency is not only communicating what you have done, but also what you are doing, why you are doing it and what you are going to do.

6.2 Dialogue

The case Blankenburgverbinding shows that it is essential for the success of co-creation that framework and conditions of participation are arranged clearly and unambiguously in advance between. What can be discussed and what not? What is the role of the participants and what are the rules? It is important to check the mutual expectations regularly during the process and to adapt if necessary.

In the process of co-creation participation means playing a role in the decision-making process. A careful choice of the participants is therefore essential. That choice can only be made by the project in interaction with the stakeholders. It is also important that the parties involved also participate with the right intentions. Participants have a tendency to only look at their own interests. The actual creation of quality requires the ability to look beyond ones own interests. A regular process evaluation, at least at each phase transition, may help. According to the philosophy of SSI resistance may be reduced by proactively identifying issues and accompanying interests of stakeholders. In practice, however, not all of the issues and interests can be appointed proactive. There are usually many stakeholders and the environment is diverse. Issues are sometimes broader than the project itself. Sometimes issues are important

for the environment, but have limited impact on the project. Issues also have a tendency to be stubborn and regularly come back on the agenda. Moreover, real interests reveal themselves gradually, often in response to presented designs. Therefore, additional to a proactive inventory, the continuous scanning of issues and interests through interaction and dialogue is important. To monitor opinions plans should be presented to relevant stakeholders as early as possible.

6.3 Transparency

Transparency is an essential source for trust. The project organization has from the start of the project chosen for open and (almost) full information sharing with the environment. However, close involvement through interaction and dialogue costs time and gives tension to the (tight) project time schedule. Information leads to reaction, which may have a delaying effect on the project's progress. Moreover, close involvement of stakeholders in earlier phases created expectations for later phases. Under time pressure possible opportunities may be skipped, which may adversely affect the relationships in later phases, and sometimes promises are done just to go on with the project. The participation strategy should be carefully developed adjusted to the project. It is essential to clarify the process and conditions to the stakeholders and to share expectations at least at the beginning of each stage.

7. Finally

Did the co-creation lead to added spatial quality for the Blankenburgverbinding and its surrounding area? From the above it is clear SSI did not result in an integral area design supported by all stakeholders. Locally, especially the design tables in the exploration and the planning phase, were very successful. However, it is an illusion to get all stakeholders intensely involved. Those who were principally against the project, did simply not want to get involved to keep their negotiation positions. Those who wanted to be involved concerned a select and enthusiastic group. An important lesson is the initiative role of the project in co-creation, because stakeholders are mostly reactive. Very difficult was continuously finding the right balance between the involvement of stakeholders through dialogue and the project management process, strongly governed by the time schedule.

It is absolutely important that the client of a project agrees on the participation strategy and its specific content. Participation through co-creation can only be effectively if space for ideas and creativity is provided. That space must be secured in advance to avoid disappointment later. It is important to explicitly separate the decision-making process from the participation process. Co-creation provides the information for decision making, not the decision making itself! In this way participation and co-creation provide the foundations for combined transport and spatial quality.

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